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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,261	03/13/2001	Wayne E. Bretl	7174A	9120
7590	02/09/2005		EXAMINER	
Jack Kail Zenith Electronics Corporation 2000 Millbrook Drive Lincolnshire, IL 60069			CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/804,261	BRETL ET AL.	
	Examiner Hong Cho	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-48 and 54-99 is/are pending in the application.
 4a) Of the above claim(s) 1-27, 69-75, 82-91 and 96-99 is/are withdrawn from consideration.
 5) Claim(s) 28-48, 54-68, 76-81 and 92-95 is/are allowed.
 6) Claim(s) _____ is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) 1-48 and 54-99 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 13 March 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>02072002</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

The second preliminary amendment filed on 12/22/04 has been entered. Claims 49-53 are canceled. Claims 1-48 and 54-99 are pending in the instant application.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-27, 69-75, 82-91, and 96-99 drawn to a transmitter with a coder and interleaver transmitting digital signals, classified in class 370, subclass 498.
 - II. Claims 28-48, 54-68, 76-81, and 92-95 drawn to a receiver with a decoder and data discarding receiving digital signals, classified in class 348, subclass 725.

The inventions are distinct, each from the other because of the following reasons:

 2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as an interleaver that is not required for the operation of the receiver in invention II. See MPEP § 806.05(d).
 3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
 4. During a telephone conversation with Trevor Joike on 1/4/2005 a provisional election was made with traverse to prosecute the invention of group II, claims 28-48, 54-68, 76-81, and 92-95. Affirmation of this election must be made by applicant in replying to this

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Office action. Claims 1-27, 69-75, 82-91, and 96-99 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. This application is in condition for allowance except for the following formal matters:

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

- The PCT search report, submitted as part of the IDS, has not been considered because a copy of reference was not provided.
- The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
- The Oath/Declaration is missing and needs to be provided.
- The non-elected claims must be canceled.

Allowable Subject Matter

7. Claims 28-48, 54-68, 76-81, and 92-95 are allowable.

The following is an examiner's statement for reasons for allowance.

8. Claims 28, 33, 37, and 42 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose receiving the normally ordered first data resulted from inner and outer coding of first input data and two interleaving operations and the reordered second data resulted from inner coding of second input data and one interleaving operation; decoding the received data to recover the normally ordered first data and the reordered second data; and discarding the reordered second data. It is noted that the closest prior art of record, Knutson et al shows a method of inserting auxiliary data in a transport data stream. However, Knutson et al fail to suggest the specific operation of interleavers, decoders, and a data discarding as required by the claimed invention.

Claims 44 and 54 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a first receiver processing robust N level VSB data and discarding N level ATSC data and a second receiver processing robust N level ATSC data and discarding N level VSB data.

Claim 58 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose providing an ATSC frame containing a plurality of ATSC segments, wherein some of the ATSC segments comprise outer coded data packed into Reed/Solomon parity data between a non-outer coded ATSC transport header and non-outer coded ATSC Reed/Solomon parity data.

Claim 62 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose an data frame comprising a

plurality of ATSC data segments, wherein one complete Reed/Solomon block of the first data symbols is packed into one complete ATSC data segment, and wherein one complete Reed/Solomon block of the second data symbols is packed into two complete ATSC data segments.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - US Patent (6788710) to Knutson et al. discloses auxiliary data insertion in a transport data stream
 - US Patent (6335766) to Twitchell et al. discloses transmitting advanced television signals
 - US Patent (6269125) to Seccia et al. discloses trellis encoding
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hong Cho
Patent Examiner
1-4-2005



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